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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

AUDUBON SOCIETY OF PORTLAND, WILDLIFE DEFENSE FUND, CENTER FOR BIOLOGICAL DIVERSITY, FRIENDS OF ANIMALS,

Plaintiffs,

v.

U.S. ARMY CORPS OF ENGINEERS, U.S. FISH AND WILDLIFE SERVICE, USDA WILDLIFE SERVICES,

Defendants.

No. 3:15-cv-665-SI

DECLARATION OF BARRY THOM

I, Barry Thom, declare and state as follows:

1. I am currently the Deputy Regional Administrator of the National Oceanic and Atmospheric Administration, National Marine Fisheries Service ("NMFS"), West Coast Region. NMFS is a part of the National Oceanic and Atmospheric Administration, in the U.S. Department of Commerce. I have been employed by NMFS since 2001, and have held my current position since 2007. My responsibilities include, among other things, supervising eight supervisors, biologists, and administrative staff, including three Assistant Regional Administrators and the Associate Deputy Regional Administrator. All programs in the West Coast Region come under my supervision, including fisheries management; and the Endangered Species Act ("ESA") and Marine Mammal Protection Act ("MMPA") administration for species of salmon and steelhead in Washington, Oregon, Idaho and California. This includes ESA § 7(a)(2) consultations for all habitat, hydropower, harvest and recovery hatchery actions affecting listed Pacific salmon and steelhead. Furthermore, NMFS's ESA program involves the listing and status reviews of species in need of protection, designation of critical habitat for such species and the development of plans for the recovery and delisting of these species. In particular for this declaration, I have been involved in the development and implementation of ESA § 7(a)(2) biological opinions for the Federal Columbia River Power System ("FCRPS") since 2009. I received a Bachelor of Science from Oregon State University in fisheries science and a Master of Science in fisheries from the University of Washington. This declaration is based on information within my personal knowledge and available to me in my official capacity.

2. I am very familiar with the efforts of NMFS staff to manage conflicts between avian predators and salmonids in the Columbia River Basin. This includes NMFS's determination that, in order to avoid the likelihood of jeopardizing listed species and adversely modifying their critical habitat under section 7 of the ESA, the federal Action Agencies for the FCRPS (U.S. Army Corps of Engineers, Bonneville Power Administration, and U.S. Bureau of Reclamation), must, among other things, reduce predation associated with the colony of double-crested cormorants on East Sand Island back to "base period" levels. The "base period" was

defined as the years 1983-2002. As explained below, NMFS's determination is reflected in Reasonable and Prudent Alternative Action 46 (RPA 46) of the biological opinions for the Federal Columbia River Power System, and is an important element of NMFS's comprehensive strategy to ensure the avoidance of jeopardy and destruction or adverse modification to critical habitat of ESA-listed species under NMFS's jurisdiction, as set forth in consultation on the Operation of the Federal Columbia River Power System (hereafter, 2008 FCRPS BiOp; 2014 Supplemental FCRPS BiOp).

3. There are 13 ESA-listed species of salmon and steelhead in the Columbia River Basin (see 2008 FCRPS BiOp, Chapter 3.1). This includes 5 species of steelhead (Threatened Snake River, Middle Columbia, Upper Willamette River, and Lower Columbia River steelhead and Endangered Upper Columbia River steelhead) which are particularly vulnerable to avian predators like double-crested cormorants and Caspian terns because they, more than any other species, migrate near the surface of the river.

4. NMFS, working closely with federal, state, and tribal agencies has, over the past two decades, developed a comprehensive approach to improving the status of ESA-listed salmon and steelhead. NMFS's strategy draws on the work of McElhany et al. (2000), which defined characteristics of viable salmonid populations that are likely to result in persistence for at least 100 years. These "VSP" characteristics are abundance, productivity, spatial structure, and biological diversity. (2008 FCRPS BiOp, Chapter 7.1.1.2; 2014 Supplemental FCRPS BiOp, Section 2.1.1). This framework has been widely accepted by both resource managers and the scientific community on the west coast and has been used in every salmon and steelhead status review and recovery plan completed by NMFS. It has also been used as a basis for analysis in most large and complex biological opinions such as the FCRPS BiOp.

5. NMFS identified many factors that have contributed to the current status of ESA-listed salmon and steelhead in the Columbia River Basin. These factors can be categorized broadly into four "H's" of impacts stemming from (i) harvest, (ii) hydropower, (iii) hatcheries, (iv) habitat, as well as predation. It is NMFS's position that it is important to reduce mortality to

ESA-listed salmonids from each of these sources. Accordingly, since 2000, NMFS has employed an "All-H Strategy" to reduce threats from each of these sources (including predation) and improve the status of each of the VSP parameters. This comprehensive approach is fundamental to the FCRPS Biological Opinion.

6. Implementation of the FCRPS RPA is also a key strategy in each of NMFS's completed or developing recovery plans for the seven ESA-listed species from the interior Columbia River Basin because 1) of the extremely large action area encompassed by this single biological opinion, and 2) the many substantial actions it requires to avoid jeopardizing the affected species and adversely modifying their critical habitats.

7. Generally, the plaintiffs assert that the rapidly increasing double-crested cormorant colony in the lower Columbia River is not having a substantial impact on the decline or recovery of ESA-listed salmonids, and NMFS's decision to include RPA 46, requiring the federal Action Agencies to reduce predation associated with this colony of birds back to "base period" levels, will not help avoid jeopardy to ESA-listed salmonid species. Implicit in this view is their belief that the declines and continued depression of the ESA-listed salmonid species in question result primarily from over-harvest, hatchery practices, habitat degradation, upstream and downstream passage impediments at Columbia River mainstem dams, and ecological changes in the Columbia River. NMFS disagrees with the notion that reducing predation from these birds will not help avoid jeopardy to ESA-listed salmonid species.

8. Under the "All-H" strategy mentioned above, NMFS's approach to recovering listed salmonids in the Columbia River has been to aggressively seek reductions in all sources of mortality as soon as practicable. As explained in the Biological Opinion, NMFS's Reasonable and Prudent Alternative included a large number of actions (adaptive management, hydro, habitat, hatchery, predation, and research, monitoring, and evaluation). Under each action, NMFS provided a series of strategies to meet the objective of each action. In crafting these strategies, NMFS analyzed the long-term productivity of all listed salmonid populations for which we had sufficient data, identified productivity gaps, and identified actions being taken, or

that needed to be taken, in all sectors to improve survival and productivity. One of the many needed actions identified in that analysis was to reduce double-crested cormorant predation back to Base Period levels. Other actions included extensive habitat improvements, survival improvements at Columbia River Dams, and water management actions intended to increase flows during the spring outmigration compared to historical operations (see 2008 FCRPS BiOp RPA Action Table). Progress on all of these actions is important to meeting the goals of the RPA.

9. NMFS continues to adhere to the VSP and the "All-H" strategy as the best available science for assessing the status of ESA-listed salmon and steelhead species, identifying factors (including predation) that impact these parameters, and encouraging or prescribing actions to address these factors in our recovery plans, biological opinions, permitting actions, etc. It is important to reduce, to the extent practicable, all sources of adverse impacts to ESA-listed salmonids, particularly those factors that are substantial and increasing in magnitude, as is the case with the double-crested cormorant colony on East Sand Island.

10. NMFS has long taken the position that reducing predation of ESA-listed salmonids is an important aspect of this comprehensive approach. California Sea Lions are the most significant predator of adult salmon and steelhead in the Columbia River Basin (impacting spring Chinook salmon and winter-run steelhead to the greatest extent). Starting in 2006, they have been the subject of a predator control program downstream of Bonneville Dam.

11. In addition, NMFS has also identified double-crested cormorants, Caspian terns, northern pikeminnow, and several other non-native fish species as either known, or potentially significant, predators of juvenile salmonids. Caspian terns and northern pikeminnow have been the subjects of successful control programs for nearly two decades.

12. As a result of the research, monitoring, and evaluation components of the 2008 FCRPS biological opinion, the East Sand Island double-crested cormorant colony is very well studied. This Action Agency led, cooperative research effort, has resulted in a wealth of information about these birds (e.g., abundance, energetic requirements, fledgling success, etc.)

and their impacts to ESA-listed and unlisted salmon and steelhead (e.g., species specific consumption estimates of both wild and hatchery smolts, use of alternative prey species, etc.) Available information documents that the number of double-crested cormorants inhabiting East Sand Island has increased dramatically in the past two decades. It is also shows that double-crested cormorants eat substantial numbers (16 to 20 million annually from 2010 to 2013) of juvenile salmon (yearling and subyearling Chinook, sockeye, and coho) and steelhead each year (Roby et al. 2014).

13. RPA 46 is an integral part of a well-founded, carefully considered suite of actions that are necessary to avoid jeopardy to listed species and adverse modification of their habitat. Delaying the implementation of RPA Action 46, which should be completed within the 2008-2018 time-frame of the FCRPS biological opinion, will likely result in the continuing annual loss of another 16-20 million smolts migrating out of the Columbia River in 2015 and beyond—many of them wild fish from ESA-listed populations. From NMFS's perspective, it is important to stem the increasing impacts of double-crested cormorants as part of the "All-H" approach to recovering ESA salmon and steelhead in the Columbia Basin.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 6, 2015, in Portland, Oregon.

Barry Thom
Deputy Administrator
West Coast Region
National Marine Fisheries Service